

FIELD NOTES ON TWO HAIRSTREAKS FROM NEW MEXICO WITH DESCRIPTION OF A NEW SUBSPECIES (LYCAENIDAE)

CLIFFORD D. FERRIS¹

Bioengineering Program, University of Wyoming, Laramie, Wyoming 82071

ABSTRACT. Field notes are provided for two hairstreak species found in the Organ Mountains of New Mexico. A new subspecies of *Fixsenia polingi* (Barnes & Benjamin) is described.

Although he worked with many butterfly families, Harry Clench was perhaps best known to many lepidopterists for his work with the Lycaenidae. Although his most recent field trips were to the Bahamas, Harry traveled and collected in the southwestern U.S., and especially in New Mexico. In recognition of this aspect of Harry's contributions, this paper is devoted to a discussion of two hairstreaks found during 1979 in the Organ Mountains of New Mexico.

In May and June 1979, Richard Holland and I collected extensively in the Organ Mts. in Doña Ana Co. This relatively small range is oriented north-south and lies just to the east of Las Cruces. U.S. Hwy. 70 from Las Cruces to Alamogordo is the only paved-road access to the mountains, where it crosses their northern end via San Augustin Pass. On the northeastern side, there is public access to the Aguirre Spring Recreation Site, operated by the Bureau of Land Management (BLM). It is located on the desert at the base of the range. The remainder of the eastern slope is part of the White Sands Missile Range (WSMR) facility. Access is only by special permit, and limited to certain areas. The foothills of the western slope are partially BLM land and partially privately owned. There are primitive access roads to some of the canyon mouths. A hiking trail extends from Aguirre Spring across Baylor Pass to a BLM gravel access road on the west side of the range. The Pine Tree Trail is a loop trail from Aguirre Spring into the hills above the recreation site. The major south-central portion of the mountains is part of the Ft. Bliss Military Reservation and is closed to public access, although there are no barricades or signs, depending upon where one hikes.

The Organ Mts. are one of numerous isolated desert mountain ranges found in the southwestern U.S. They were formed by an upwelling of molten rock within the earth's crust—a process called mon-

¹ Research Associate, Allyn Museum of Entomology (Sarasota, Fla.) and Florida State Collection of Arthropods (Division of Plant Industry, Florida Dept. of Agriculture and Consumer Services, Gainesville); Museum Associate, Los Angeles County Museum of Natural History (Los Angeles, California).

zonite intrusion. Subsequent erosion of the overlying crust has left rock spires that resemble organ pipes, giving rise to their name.

Vegetation varies widely from typical southwestern desert forms (*Celtis* sp. and *Ungnadia speciosa* Endl., in the arroyos; *Prosopis* elsewhere) at the base of the range, through an oak chaparral belt to a limited coniferous forest (Douglas Fir) at the highest elevations (2590–2745 m). There is some permanent water in the interior canyons.

Considering the geographic isolation of these mountains and the apparent lack of moisture, they harbor an exceptional number of butterfly species. Many records were obtained by the author and R. Holland. A full species list will be published elsewhere by Holland.

Fig. 1 shows most of the Organ Mts. as viewed from the west. Fig. 2 shows a canyon located toward the southwestern end of the range. This is typical habitat for the new subspecies of *Fixsenia polingi* (Barnes & Benjamin) described below.

Incisalia henrici solatus Cook & Watson, 1909

In March 1979, R. Holland collected a series of *Incisalia* in a canyon on the western side of the Organ Mts. Specimens that he subsequently sent to me for an opinion proved to be *Incisalia henrici*, previously known in New Mexico only from Guadalupe Ridge near Carlsbad. For the present, I have placed this material as *solatus*. It matches well some of my examples from western Texas, and is clearly not the longer-tailed *turneri* Clench. *I. h. solatus* was described from 17 specimens taken in Blanco Co., Texas, and Holland's material fits the original description quite well. Cook and Watson did not illustrate *solatus*. A female from New Mexico is shown in Figs. 3–4.

There are several phenotypes of *henrici* in Texas, and the material from western Texas needs considerable further study. With such study, *henrici* from the Organ Mts. may prove to be a new subspecies, as is the case with *Fixsenia polingi*, described subsequently.

Fixsenia polingi (Barnes & Benjamin), 1926

A preliminary note about hairstreak nomenclature is necessary: in 1961, Harry Clench erected the new genus *Euristrymon* containing the species: *favonius* J. E. Smith, *ontario* W. H. Edwards, and *polingi* Barnes & Benjamin. In a 1978 paper, Clench lumped *Euristrymon* as a synonym of *Fixsenia* Tutt, 1907. *Fixsenia* was originally applied to Old World fauna with the Asiatic type species *Thecla herzi* Fixsen, 1887.

On the morning of 28 May 1979, I was collecting on one side of Texas Canyon (WSMR) in the Organ Mts., when I netted a specimen of *Fixsenia polingi* nectaring at the white flower of a shrub. The collection site included a small oak grove. Several additional specimens were taken that afternoon. Subsequent collecting in other canyons on both sides of the mountain range by R. Holland, B. Harris and the author produced a small series of *polingi*.

As reported for Texas (Davis Mts.), the butterflies were always associated with scrub oak. Several species or varietal forms of scrub oak occur in the Organs, and the butterflies did not seem to be restricted to any one kind. A few specimens were taken on flowers, especially *Asclepias asperula* (Deene.) Woodson, a low-growing milkweed with inconspicuous greenish-white flowers. The majority of the specimens were collected by the time-honored method of beating the oaks. When startled in this manner,



FIG. 1. Organ Mts. viewed from west.

FIG. 2. Typical canyon in Organ Mts. where *F. polingi* flies.

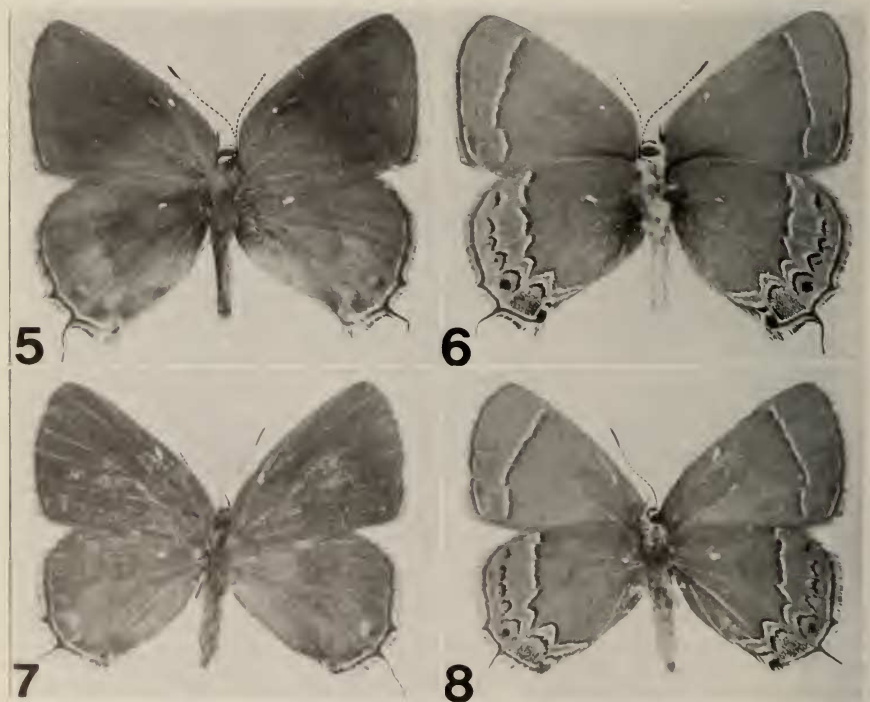
the butterflies would generally fly about 100 feet and settle on another scrub oak. Occasionally they would return to their initial perch. Others just disappeared into the haze, thus frustrating the collector. The oaks normally grow on fairly steep talus slopes and collecting *polingi* is not an easy matter. The butterflies are quite wary, especially after being disturbed initially.

Recent examination of the specimens collected indicated several consistent differences between *polingi* from the Organ Mts. and material from the only other known

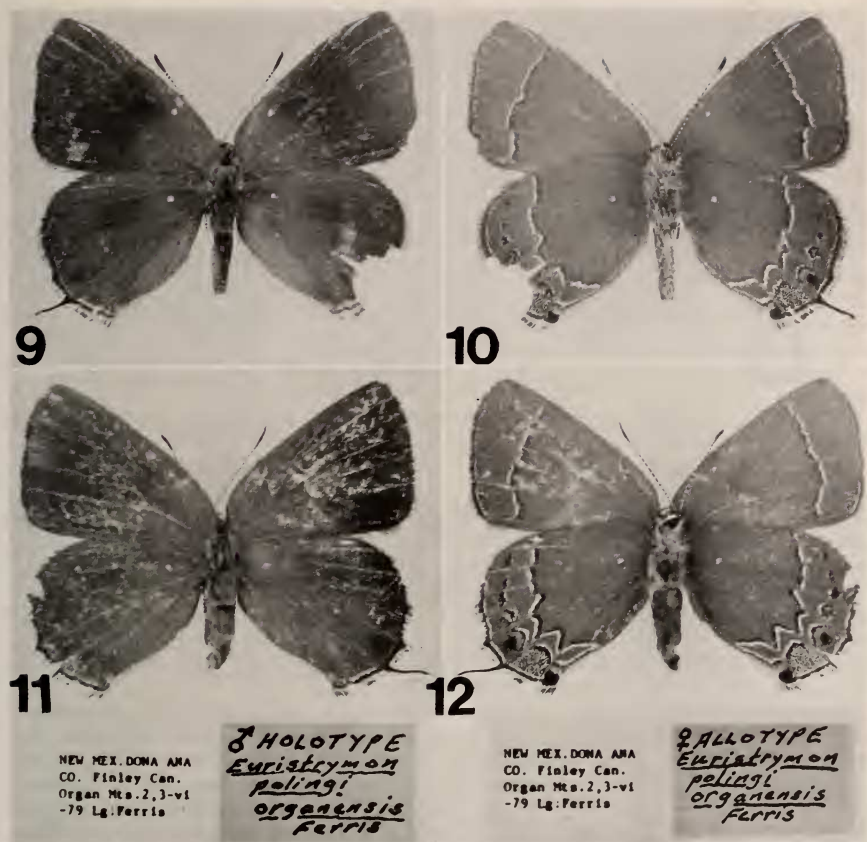


FIGS. 3-4. *Incisalia henrici solatus*: 3, ♀ (dorsal), Organ Mts., March 1979, R. Holland collector; 4, same (ventral).

populations in the Davis Mts. and Big Bend area of Texas. The Davis Mts. butterfly is designated *Fixsenia polingi polingi* (Barnes & Benjamin), and a new subspecies is described for material from the Organ Mts., Doña Ana Co., New Mexico. Texas specimens are shown in Figs. 5-8.



FIGS. 5-8. *Fixsenia polingi polingi*: 5, ♂ (dorsal), 10 mi N of Alpine, Brewster Co., Texas, 1 June 1973, leg. J. Harry; 6, same (ventral); 7, ♀ (dorsal), same data; 8, same (ventral).



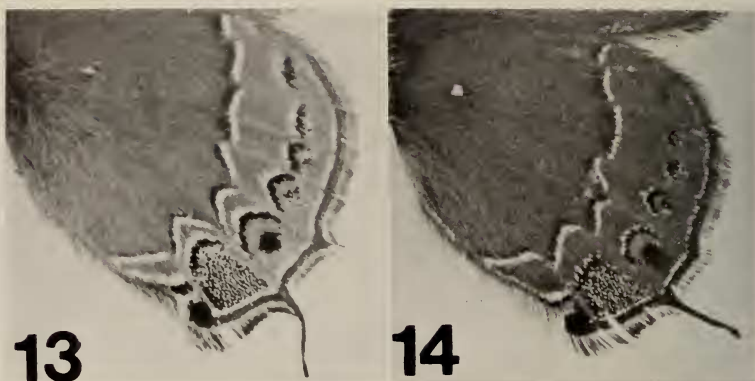
FIGS. 9-12. *Fixsenia polingi organensis*: 9, Holotype ♂ (dorsal); 10, same (ventral); 11, Allotype ♀ (dorsal); 12, same (ventral); specimen labels.

Fixsenia polingi organensis Ferris, new subspecies

The original description of *Strymon polingi* appeared in a supplement to the general checklist of North American butterflies published by Barnes & Benjamin (1926a, b). The type series consisted of a Holotype ♀ [*sic*, male assumed], Allotype ♀ and 125 Paratypes of both sexes, collected on the Sunny Glen Ranch nr. Alpine, Brewster Co., Texas. The published description is limited to six short sentences in which the new species is compared with various aspects of [*Phaeostrymon alcestitis*] *alcestitis*, [*P. alcestitis*] *oslari*, [*Fixsenia ontario*] *autolytus*, and [*F. ontario*] *ontario*. There is no clear description and *polingi* is not illustrated.

In the following paragraphs, I emphasize the differences between *polingi* and *organensis*. The text description of *polingi* in Howe (1975, p. 301) is incorrect in several respects, although the illustrations (Pl. 52, F. 19-20) are accurate.

Types and location. This subspecies is described from 15 specimens in the C. D. Ferris collection, collected in the Organ Mts., Doña Ana Co., New Mexico, in late May and early June 1979. The Holotype male and Allotype female were collected in Finley Canyon, W slope Organ Mts., 2, 3 June 1979, ca. 6500 ft (1980 m). They have been



FIGS. 13-14. *Fixsenia polingi*: 13, *polingi* ♂ VHW; 14, *organensis* Holotype ♂ VHW.

placed in the Allyn Museum of Entomology, Sarasota, Florida. They are illustrated with their labels in Figs. 9-12. The locality labels are machine-printed black-on-white. The red Holotype and green Allotype labels are hand-printed in black ink. The 13 Paratypes are presently in the author's collection. R. Holland was in Central America when this paper was prepared; consequently his specimens were not available for inclusion in the type series. The Paratypes are as follows: Finley Canyon, 2, 3 June 1979, 3♂, 2♀; Texas Canyon (WSMR), 28 May 1979, 2♂; canyon in central portion of Organ Mts., NW of Texas Canyon, 29 May 1979, 5♂, 1♀.

Diagnosis and description. Except as noted below, the sexes are similar. **Head.** **Antennae.** Approximately 55% of length of FW costa; ringed black-and-white; tip, yellow-orange. **Palpi.** White with some black hairs (dark hairs more extensive in *polingi*). **Eyes.** Brown, slightly hairy. **Face** (frontoclypeal sclerite). Covered with charcoal-gray hairs (dark brown hairs in *polingi*). **Thorax.** Dorsal color matches dorsal ground color of wings; ventrally covered with white and dark hairs producing an overall charcoal-gray aspect (pale brownish-gray aspect in *polingi*). **Legs.** Femur and tibia colored as in ventral thorax; tarsomeres black-and-white banded. **Abdomen.** Dorsal color matches dorsal ground color of wings; slightly paler ventrally. **Wings.** Ground color dark gray-brown dorsally; slightly paler ventrally. No fulvous (Smithe nos. 16-17) DFW patches in females as frequently seen in *polingi*. DHW subterminal fulvous lunule, frequently found in *polingi*, is either absent or very weakly expressed in *organensis*. Fringes with mixed white and dark hairs HW and FW tornus, becoming entirely white along FW outer margin. The males exhibit a small, but clearly defined FW costal scent pad (also found in *polingi*). Both sexes show some gray scales at the D wing bases. Ventrally, *organensis* differs substantially from *polingi*. The ground color is a cold gray-brown, while it is a paler and warmer gray-brown in *polingi*. The major differences are seen on the VHW as shown in Figs. 13-14. In *organensis*, the submarginal spot-and-lunule row is much reduced. The amount of orange that caps the black spots is very much reduced. The basad white lunule caps are nearly obsolete, while prominent in *polingi*. The aspect presented by *organensis* is that of a single postdisal band with a weak submarginal spot/lunule row; *polingi* presents more of a double-banded aspect. There is a suggestion of a second HW tail in *polingi*; only a marginal irregularity appears in *organensis*. On the VFW of *polingi*, there is a weakly defined submarginal band of elongated spots, distal to the white linear band; these spots are absent in *organensis*. The FW of both sexes are very similar in shape, and more rounded than in other *Fixsenia* species. **Expanse** (FW costa). Holotype: 16 mm; male range: 15-16.5 mm. Allotype: 16.5 mm; female range: 15-18 mm.

Male genitalia. Genitalia of *polingi* and *organensis* are identical.

Variation. Other than the absence or presence of the DHW orange lunule and the size of the DFW scent pad in the males, there is essentially no pattern variation in the type series.

Etymology. The name is a Latinization of the name of the mountain range in which the type series was collected. There is no word in classical Latin for organ, since this musical instrument was unknown during the Roman Empire.

Bionomics and distribution. Nothing is known of the life history. The adults are always in association with several species or varietal forms of scrub oak. The flight period appears to be the last week of May and the first week in June. This subspecies seems to be widely distributed throughout the Organ Mts. wherever scrub oak occurs. Many more specimens were seen than the type series indicates. Collecting this insect is not easy because of the habitat terrain; one must also contend with numerous rattlesnakes (at least three species), and many thorned plants.

ACKNOWLEDGMENTS

I would like to thank Richard Holland for introducing me to the Organ Mts., and Lee Miller for his encouragement during preparation of this paper. I first corresponded with Harry Clench at the Carnegie Museum when I was in high school, and sent him sketches and photographs of tropical butterflies for identification. His replies encouraged me to pursue butterfly collecting in a serious vein. We later became good friends and Harry was always a willing and effective critic when I sent him preliminary drafts of my papers for his comments.

LITERATURE CITED

- BARNES, W. & F. H. BENJAMIN. 1926a. Check list of the diurnal Lepidoptera of boreal America. Bull. So. Calif. Acad. Sci. 25: 3-27.
——— 1926b. Notes on diurnal Lepidoptera, with additions and corrections to the recent "List of diurnal Lepidoptera." Bull. So. Calif. Acad. Sci. 25: 88-98.
COOK, J. H. & F. E. WATSON. 1909. *Incisalia* (Lepidoptera) from Texas. Canad. Ent. 41: 181-182.
CLENCH, H. K. 1978. The names of certain hairstreak genera (Lycaenidae). J. Lepid. Soc. 32: 277-281.
HOWE, W. H., ED. 1975. The Butterflies of North America. Doubleday & Co., Inc., Garden City, New York. 633 pp.
SMITHE, F. B. 1976. Naturalist's color guide. Amer. Mus. Nat. Hist., New York.

Note added in proof: R. Holland took a single specimen of *organensis* in the Capitan Mts., Lincoln Co., New Mexico, in 1980.